PAT-NO: JP361182284A

DOCUMENT-IDENTIFIER: JP 61182284 A

TITLE: ELECTROSTRICTIVE EFFECT ELEMENT

PUBN-DATE: August 14, 1986

INVENTOR-INFORMATION:

NAME

OCHI, ATSUSHI

ASSIGNEE-INFORMATION:

NAME COUNTRY NEC CORP N/A

APPL-NO: JP60022860

APPL-DATE: February 8, 1985

INT-CL (IPC): H01L041/08

## ABSTRACT:

PURPOSE: To reduce spaces among  $\underline{\text{internal electrodes}}$  to a fine value, and to

enable driving at low voltage by alternately laminating electrostrictive

material layers and internal electrode layers, forming these layers
to a

trapezoid shape with a parallel surface, insulating the internal electrode

layers exposed to a nonparallel trapezoid surface at every other one and

applying  $\underline{\text{external electrodes}}$  along the  $\underline{\text{internal electrodes}}$  exposed at every

other one.

CONSTITUTION: An extremely small quantity of an organic binder is added to

the baking material of an electrostrictive material mainly comprising magnesium  $% \left( 1\right) =\left( 1\right) +\left( 1\right) +\left($ 

lead niobate and lead titanate, and green sheets 21, 22, etc. consisting of the

12/5/08. EAST Version: 2.3.0.3

electrostrictive material are manufactured by using a casting film forming

device.  $\underline{\text{Internal electrodes}}$  23, 24, etc. composed of Pt are printed on one

surfaces of these green sheets, and several hundred of these sheets are  $% \left\{ 1\right\} =\left\{ 1\right\} =\left\{$ 

superposed, hot-pressed, contact-bonded and unified. The unified sheets are  $\,$ 

cut to trapezoid shapes with parallel surfaces, the  $\underline{\text{internal}}$  electrodes exposed

to nonparallel trapezoid surfaces are coated with glass films 27, 28, etc. at

every other one while being alternated on mutually opposite trapezoid surfaces,  $% \left( 1\right) =\left( 1\right) \left( 1\right) +\left( 1\right) \left( 1\right) \left( 1\right) +\left( 1\right) \left( 1\right)$ 

<u>external electrodes</u> 29 are applied on trapezoid surfaces along the exposed internal electrodes, and external connecting terminals 32, 33 are

positioned at trapezoid top sections.

COPYRIGHT: (C)1986, JPO&Japio